```
FILE 'HOME' ENTERED AT 11:55:39 ON 20 OCT 2008

=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                    ENTRY        SESSION
FULL ESTIMATED COST                                 0.21          0.21


INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
       AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
       CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
       DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 11:56:06 ON 20 OCT 2008

69 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.

=> s (anopore or ((aluminum or metal##) (4a) oxide)) (s) por###
         12    FILE AGRICOLA
         17    FILE ANABSTR
         60    FILE ANTE
         24    FILE AQUALINE
         32    FILE AQUASCI
         29    FILE BIOENG
         74    FILE BIOSIS
         93    FILE BIOTECHABS
         93    FILE BIOTECHDS
         23    FILE BIOTECHNO
         38    FILE CABA
       7886    FILE CAPLUS
        144    FILE CEABA-VTB
         13    FILE CIN
         15    FILE CONFSCI
          4    FILE CROPU
          1    FILE DDFB
         35    FILE DGENE
  23 FILES SEARCHED...
        184    FILE DISSABS
          1    FILE DRUGB
          2    FILE DRUGU
          3    FILE EMBAL
        101    FILE EMBASE
        114    FILE ESBIOBASE
          4    FILE FROSTI
         11    FILE FSTA
        301    FILE GENBANK
          1    FILE HEALSAFE
       4676    FILE IFIPAT
          8    FILE KOSMET
         43    FILE LIFESCI
        109    FILE MEDLINE
        207    FILE NTIS
         11    FILE OCEAN
        987    FILE PASCAL
  47 FILES SEARCHED...
          1    FILE PHIN
        244    FILE PROMT
         19    FILE RDISCLOSURE
       1016    FILE SCISEARCH
        542    FILE TOXCENTER
```

```
      20     FILE USGENE
   20625     FILE USPATFULL
    3312     FILE USPATOLD
    3475     FILE USPAT2
      54     FILE WATER
    6843     FILE WPIDS
  67 FILES SEARCHED...
      92     FILE WPIFV
    6843     FILE WPINDEX

  48 FILES HAVE ONE OR MORE ANSWERS,   69 FILES SEARCHED IN STNINDEX

L1    QUE (ANOPORE OR ((ALUMINUM OR METAL##) (4A) OXIDE)) (S) POR###

=> s L1 (s) (cultur### or grow###)
       2     FILE AGRICOLA
       2     FILE ANABSTR
      11     FILE ANTE
       2     FILE AQUASCI
       5     FILE BIOENG
       4     FILE BIOSIS
      21     FILE BIOTECHABS
      21     FILE BIOTECHDS
  12 FILES SEARCHED...
       2     FILE BIOTECHNO
       4     FILE CABA
     183     FILE CAPLUS
      10     FILE CEABA-VTB
       1     FILE CONFSCI
       3     FILE DGENE
  23 FILES SEARCHED...
      31     FILE DISSABS
       5     FILE EMBASE
      14     FILE ESBIOBASE
       1     FILE FROSTI
       2     FILE FSTA
      71     FILE GENBANK
      81     FILE IFIPAT
       2     FILE KOSMET
      12     FILE LIFESCI
  42 FILES SEARCHED...
       8     FILE MEDLINE
       8     FILE NTIS
     156     FILE PASCAL
  52 FILES SEARCHED...
       9     FILE PROMT
       1     FILE RDISCLOSURE
      68     FILE SCISEARCH
       4     FILE TOXCENTER
     733     FILE USPATFULL
      53     FILE USPATOLD
     153     FILE USPAT2
       1     FILE WATER
     103     FILE WPIDS
  67 FILES SEARCHED...
       2     FILE WPIFV
     103     FILE WPINDEX

  37 FILES HAVE ONE OR MORE ANSWERS,   69 FILES SEARCHED IN STNINDEX

L2    QUE L1 (S) (CULTUR### OR GROW###)
```

```
=> s L2 (s) (microb### or microorganism# or bacteri## or cell# or virus##)
            2    FILE AGRICOLA
            2    FILE ANABSTR
            2    FILE ANTE
            1    FILE AQUASCI
            4    FILE BIOENG
            3    FILE BIOSIS
   10 FILES SEARCHED...
           17    FILE BIOTECHABS
           17    FILE BIOTECHDS
            1    FILE BIOTECHNO
   13 FILES SEARCHED...
            2    FILE CABA
            8    FILE CAPLUS
            1    FILE CEABA-VTB
            2    FILE DGENE
   23 FILES SEARCHED...
            3    FILE EMBASE
            8    FILE ESBIOBASE
   30 FILES SEARCHED...
            2    FILE FSTA
           71    FILE GENBANK
           12    FILE IFIPAT
            2    FILE KOSMET
            9    FILE LIFESCI
            3    FILE MEDLINE
   43 FILES SEARCHED...
           18    FILE PASCAL
   47 FILES SEARCHED...
            2    FILE PROMT
            4    FILE SCISEARCH
   60 FILES SEARCHED...
          127    FILE USPATFULL
            8    FILE USPATOLD
           23    FILE USPAT2
            1    FILE WATER
           26    FILE WPIDS
            1    FILE WPIFV
   68 FILES SEARCHED...
           26    FILE WPINDEX

   31 FILES HAVE ONE OR MORE ANSWERS,   69 FILES SEARCHED IN STNINDEX

L3   QUE L2 (S) (MICROB### OR MICROORGANISM# OR BACTERI## OR CELL# OR VIRUS##)

=> s L3 and (detect### or determin### or ascertain###)
            1    FILE ANABSTR
            2    FILE BIOSIS
   10 FILES SEARCHED...
            2    FILE BIOTECHABS
            2    FILE BIOTECHDS
   13 FILES SEARCHED...
            1    FILE CABA
            2    FILE CAPLUS
   23 FILES SEARCHED...
            1    FILE EMBASE
            1    FILE ESBIOBASE
   30 FILES SEARCHED...
           60    FILE GENBANK
            3    FILE IFIPAT
```

```
        1    FILE KOSMET
        1    FILE LIFESCI
  42 FILES SEARCHED...
        1    FILE MEDLINE
        7    FILE PASCAL
  47 FILES SEARCHED...
        1    FILE SCISEARCH
  60 FILES SEARCHED...
      113    FILE USPATFULL
        5    FILE USPATOLD
       23    FILE USPAT2
        9    FILE WPIDS
  67 FILES SEARCHED...
        9    FILE WPINDEX

  20 FILES HAVE ONE OR MORE ANSWERS,   69 FILES SEARCHED IN STNINDEX

L4   QUE L3 AND (DETECT### OR DETERMIN### OR ASCERTAIN###)

=> d rank
F1         113   USPATFULL
F2          60   GENBANK
F3          23   USPAT2
F4           9   WPIDS
F5           9   WPINDEX
F6           7   PASCAL
F7           5   USPATOLD
F8           3   IFIPAT
F9           2   BIOSIS
F10          2   BIOTECHABS
F11          2   BIOTECHDS
F12          2   CAPLUS
F13          1   ANABSTR
F14          1   CABA
F15          1   EMBASE
F16          1   ESBIOBASE
F17          1   KOSMET
F18          1   LIFESCI
F19          1   MEDLINE
F20          1   SCISEARCH


=> fil f4, f5, f8-f20
COST IN U.S. DOLLARS                        SINCE FILE      TOTAL
                                              ENTRY        SESSION
FULL ESTIMATED COST                           15.60         15.81

FILE 'WPIDS' ENTERED AT 12:10:18 ON 20 OCT 2008
COPYRIGHT (C) 2008 THOMSON REUTERS

FILE 'WPINDEX' ACCESS NOT AUTHORIZED

FILE 'IFIPAT' ENTERED AT 12:10:18 ON 20 OCT 2008
COPYRIGHT (C) 2008 IFI CLAIMS(R) Patent Services (IFI)

FILE 'BIOSIS' ENTERED AT 12:10:18 ON 20 OCT 2008
Copyright (c) 2008 The Thomson Corporation

FILE 'BIOTECHABS' ACCESS NOT AUTHORIZED

FILE 'BIOTECHDS' ENTERED AT 12:10:18 ON 20 OCT 2008
```

```
=> s L4
   4 FILES SEARCHED...
   9 FILES SEARCHED...
L5          26 L4

=> dup rem L5
DUPLICATE IS NOT AVAILABLE IN 'KOSMET'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L5
L6          18 DUP REM L5 (8 DUPLICATES REMOVED)

=> s L6 and py<2004
   6 FILES SEARCHED...
   9 FILES SEARCHED...
  12 FILES SEARCHED...
L7           2 L6 AND PY<2004

=> d L7 ibib abs 1-2

L7    ANSWER 1 OF 2   IFIPAT  COPYRIGHT 2008 IFI on STN
AN                      02710823  IFIPAT;IFIUDB;IFICDB <<LOGINID::20081020>>
TITLE:                  PROCESS FOR TREATING AQUEOUS SOLUTIONS CONTAINING
                        INDUSTRIAL WASTES; FLOWING AQUEOUS SOLUTION
                        CONTAINING METAL IONS OVER POROUS MATRIX
                        WHICH HAS BEEN INOCULATED WITH CULTURE OF
                        AEROBIC METAL OXIDIZING BACTERIA YIELDS
                        WATER INSOLUBLE METAL OXIDES FOR
                        RETENTION AND RECOVERY
INVENTOR(S):            Riley, Robert K, Broad St, Midland, MD, 21542, US
                        Vail, William J, 15711 Winslow St SW, Cumberland, MD,
```

NUMBER OF CLAIMS: 35
GRAPHICS INFORMATION: 7 Drawing Sheet(s), 7 Figure(s).

AB   A treatment zone 10 in the form of a basin 12 having an inlet port 14 and
     an outlet port 16. The inlet port 14 allows water to flow into the basin
     12. The outlet port 16 allows water to flow out of the basin 12. The
     inlet port 14 and the outlet port 16 are located at opposite ends of the
     basin 12 so as to allow water from a body of water having a concentration
     of water soluble metal ions contained therein to flow substantially
     through the entirety of the basin 12. A porous matrix 22 is disposed
     within the treatment zone 10. The porous matrix 22 is inoculated with a
     population of aerobic metal oxidizing bacteria. The population of aerobic
     metal oxidizing bacteria is capable of metabolizing water soluble metal
     ions in the water from the body of water into water insoluble metal
     oxides. Thus, there is an overall decrease in the concentration of the
     metal ions in the water flowing out of the treatment zone 10 as compared
     to water flowing into the treatment zone 10. The water flow out of the
     treatment zone also has a higher pH than the water flowing into the
     treatment zone.
CLMN 35
GI   7 Drawing Sheet(s), 7 Figure(s).

L7   ANSWER 2 OF 2 ANABSTR COPYRIGHT 2008 RSC on STN
AB   An amperometric biosensor has been developed in which Synechococcus
     cyanobacterium is used as biocatalyst with K3Fe(CN)6 in BG11
     culture medium (Rippka et al., J. Gen. Microbiol., 1979,
     111, 1) as mediator. The freshly harvested cells were loaded on
     to discs of $0.2-\mu m$ Anopore alumina membrane (Anotec
     Separations, Banbury, UK) or entrapped in Ca alginate, and the membrane
     was immediately applied, cell side inward, to a porous
     graphite disc electrode (Rawson et al., Toxic. Assess., 1987, 2, 325) and
     held in place by nylon mesh. The resulting sensor was conditioned
     overnight in BG11 in the dark at 25°. The biosensor was used in a
     Perspex flow cell vs. a Ag – AgCl electrode, under illumination
     by light-emitting diodes (peak wavelength 635 nm) for 5 min followed by 5
     min in the dark, to monitor the activity of photosynthetic electron

transfer within the microbial cell by
detection of reduced mediator; disturbance of the reaction chain
by addition of herbicide (e.g., ioxynil or linuron) caused a reduction of
peak current. The detection limit was .simeq.20 μg l.minus.1.
Cells immobilized on alumina membrane showed the greatest
sensitivity and those in rehydrated alginate beads the lowest, but the
latter method gave sensors with the best shelf-life; beads incorporating
the cells could be stored dry and rehydrated in 5mM-trisodium
citrate before use.

=> logoff